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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,177	10/06/2000	Bradley C. Zikes		1698

7590

10/15/2002

CAROLINE G. CHICOINE  
DOEPKEN KEEVICAN & WEISS  
ONE METROPOLITAN SQUARE, 15TH FLOOR  
211 NORTH BROADWAY  
ST. LOUIS, MO 63102

EXAMINER

JEFFERY, JOHN A

ART UNIT

PAPER NUMBER

3742

DATE MAILED: 10/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,177	10/06/2000	Bradley C. Zikes		1698

7590 09/24/2003  
CAROLINE CHLCOINE  
THOMPSON COBURN LLP  
ONE US BANK PLAZA  
ST. LOUIS, MO 63101

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7590 09/16/2002

Caroline G. Chicoine  
Doepken Keevican & Weiss  
15th Floor  
One Metropolitan Square  
St. Louis, MO 63102

EXAMINER

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*remail*

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**Office Action Summary**

Application No.

09/684,177

Applicant(s)

ZIKES ET AL.

Examiner

John A. Jeffery

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,11 and 12 is/are rejected.
- 7) ☒ Claim(s) 3-10 and 13-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

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## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 11, and 12 are rejected under 35 USC 102(b) as being anticipated by Arensmeier (US5725368). The scope and breadth of the claim language did not preclude Arensmeier (US5725368) who discloses a control system that detects the resistance of a ceramic igniter and controls the level of power to the igniter based on the detected value via a look-up table. See last sentence of Abstract and col. 4, lines 42-62. According to col. 4, lines 29-41, the resistance of igniters can vary considerably from igniter to igniter. Therefore, by measuring the resistance of the igniter, the system necessarily distinguishes the type of igniter via its resistance value. Moreover, measurement of the igniter resistance inherently requires a signal "representative of the igniter current" as claimed. Regarding claim 2, the recited operating regime (i.e., between in-rush and steady-state) is inherent to the operating regime of Arensmeier (US5725368).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1, 2, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sadakata et al (US4741692) in view of Porfido et al (US5911895) and further in view of Arensmeier (US5725368), or alternatively, Porfido et al (US5911895) in view of Sadakata et al (US4741692) and further in view of Arensmeier (US5725368). Sadakata et al (US4741692) discloses a ceramic igniter control system that detects the resistance of the igniter to perform feedback control of electric power applied to the igniter. The claims differ from the previously cited prior art in calling for distinguishing the type of igniter. Providing a control means which automatically distinguishes between diverse types of electric heaters connected to the control system and controls the heating of each unique heater based on its sensed resistance is conventional and well known in the art as evidenced by Porfido et al (US5911895). Note that the electric heater's resistance is measured along with an identifying resistor to uniquely identify each electric heater connected to the control means. Then, depending on the measured resistance of the electric heater, the associated power level and duration is applied only to that respective heater. See abstract, col. 2, lines 53-55, and Fig. 3. In view of Sadakata et al (US4741692), and further noting Arensmeier (US5725368) who teaches that resistance of igniters can vary considerably from igniter to igniter, it would have been obvious to one of ordinary skill in the art to provide a

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control system which could control one or more connected electric heaters (i.e., igniters) which provides a control signal tailored and optimized according to the individual electric heater's unique characteristics thereby providing optimum heating and enabling connection of a wide variety of diverse electric heater types to a single control system.

Alternatively, Porfido et al (US5911895) discloses a control system for a plurality of diverse electric heaters where the power level and duration for each respective type of electric heater is stored in a control means. The electric heater's resistance is measured along with an identifying resistor to uniquely identify each electric heater connected to the control means. Then, depending on the measured resistance of the electric heater, the associated power level and duration is applied only to that respective heater. See abstract, col. 2, lines 53-55, and Fig. 3. The claims differ from the previously cited prior art in calling for the electric heaters to be igniters. While the electric heaters of Porfido et al (US5911895) are for welding purposes, the use of electric heater igniters that are controlled via sensed resistance is conventional and well known in the art as evidenced by Sadakata et al (US4741692). Sadakata et al (US4741692) in the abstract discloses a ceramic electric heater whose resistance is sensed in order to provide a feedback control signal to regulate power applied to the igniter. In view of the use of electric heaters as igniters as shown in Sadakata et al (US4741692), and further noting Arensmeier (US5725368) who teaches that resistance of igniters can vary considerably from igniter to igniter, it would have been obvious to one of ordinary skill in the art to use the electric heater control system of Porfido et al (US5911895) for ignition purposes because the control system would automatically

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detect the resistance of the igniter and apply electric according to the unique igniter detected, thereby facilitating the connection of multiple diverse igniters to a single control system.

### ***Allowable Subject Matter***

Claims 3-10 and 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Other Pertinent Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The art should be both separately considered and considered in conjunction with the previously cited prior art when responding to this action. US 345 and JP 613 disclose igniter control systems relevant to the instant invention. US 076, US 042 disclose identification circuits and automatic control systems for electric heaters. US 556, US 414 disclose identification circuits for igniters.

### ***Conclusion***

Any inquiry concerning this or earlier communications from the examiner should be directed to John A. Jeffery at telephone number (703) 306-4601 or fax (703) 305-3463. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM EST. The examiner can also be reached on alternate Fridays.



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The fax phone numbers for the organization where this application or proceeding is assigned are:

Before Final (703) 872-9302

After Final (703) 872-9303

Customer Service (703) 872-9301

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0861.

A handwritten signature in black ink, appearing to read "John A. Jeffery", with a stylized flourish at the end.

**JOHN A. JEFFERY  
PRIMARY EXAMINER**

**9/11/02**